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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Mohsen Shahinpoor
& Kwang J. Kim

Art Unit: ~~Unknown~~ 1743

Serial No.: ~~Unknown~~ 09/899874

Examiner: ~~Unknown~~ TUAJ

Filed: July 5, 2001

Atty. Docket No.: 2313-00

For: Solid-State Polymeric Sensors, Transducers, and Actuators

INFORMATION DISCLOSURE STATEMENT

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

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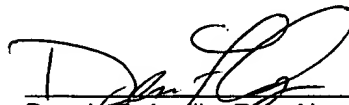
In satisfaction of his duty under 37 CFR § 1.56, Applicant submits copies of the following references which are also set forth on the attached form PTO-1449:

- 1) conducting polymers, E. Smela, , O. I. Lundstrom, Science 268, 1735 (1995);
- 2) T. F. Otero, J. Rodriguez, E. Angulo, C. Santamaria, J. Electroanal Chem. 341, 369 (1992);

- 3) A. Della Santa, D. De Rossi, A. Mazzoldi, Smart Mater. Struct. 6, 23 (1997);
- 4) M. R. Gandhi, P. Murray, G. M. Spinks, G. G. Wallace, Synth. Met. 73, 247 (1995);
- 5) A. Mazzoldi, D. De Rossi, Proceedings of SPIE-Electroactive Polymer Actuators and Devices (EAPAD) 3987, 273 (2000);
- 6) ferroelectric polymers Q. M. Zhang, V. Bharti, X. Zhao, Science 280, 2101 (1998);
- 7) J. Lovinger, Science 220, 1115 (1983);
- 8) ionic polymer metal composites M. Shahinpoor, Y. Bar-Cohen, J. O. Simpson, J. Smith, Smart Mater. Struct. 7, 15 (1998);
- 9) P. G. DE Gennes, K. Okumura, M. Shahinpoor, K. J. Kim, Europhysics Letters 50, 513 (2000);

- 10) K. Asaka, K. Oguro, Y. Nishimura, M. Mizuhata, H. Takenaka, Polym. J. 27, 436 (1995);
- 11) ionic polymeric gels R. Hamden, C. Kent, S. Shafer, Nature 206, 1149 (1965);
- 12) T. Tanaka, I. Nishio, S. Sun, S. Ueno-Nishio, Science 218, 467 (1982);
- 13) Y. Osada, H. Okuzaki, H. Hori, Nature 355, 242 (1992);
- 14) M. Doi, M. Matsumoto, Y. Hirose, Macromolecules 25, 5504 (1992).

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Respectfully submitted,

Date: July 5, 2001

By: 
Dennis F. Armijo,
Reg. No. 34,116

DENNIS F. ARMIJO, P.C.
5300 Sequoia Rd., NW, Suite 200
Albuquerque, NM 87120

Telephone: (505) 839-0123
Facsimile: (505) 839-4017

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		Application Number	
		Filing Date	July 5, 2001
		First Named Inventor	Mohsen Shahinpoor
		Group Art Unit	
		Examiner Name	
Sheet 1 of 2	Attorney Docket Number	2313-00	

J1036 U.S. PTO
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		Controlled Folding of Micrometer-Size Structures E. Smela, O. Ingham, I. Lundstrom, Science 268, 1735 (1995)	
		Electrochemomechanical properties from a bilayer: polypyrrole/ non-conducting and flexible material - artificial muscle. T.F. Otero, J. Rodriguez, E. Angulo, C. Santamaria, J. Electroanal Chem. 341, 369 (1992)	
		Performance and work capacity of a polypyrrole conducting polymer linear actuator, A. Della Santa, D. De Rossi, A. Mazzoldi, Synthetic Metals, 90, 93 (1997)	
		Mechanism of electromechanical actuation in polypyrrole M.R. Gandhi, P. Murray, G.M. Spinks, G.G. Wallace, Synth. Met. 73, 247 (1995)	
		Conductive polymer based structures for a steerable catheter A. Mazzoldi, D. DeRossi, Proceedings of SPIE-Electroactive Polymer Actuators and Devices (EAPAD) 3987, 273 (2000)	
		Giant Electrostriction and Relaxor Ferroelectric Behavior in Electron-Irradiated Poly(vinylidene fluoride-trifluoroethylene) Copolymer, Q.M. Shang, V. Bharti, X. Zhao, Science 280, 2101 (1998)	
		Ferroelectric Polymers, A.J. Lovinger, Science 220, 1115 (1983)	
		Ionic Polymer-metal composites (IPMC) as Biomimetic Sensors, Actuators & Artificial Muscles - A Review, M. Shahinpoor, Y. Bar- Cohen, J.O. Simpson, J. Smith, Smart Mater. Struct. 7, 15 (1998)	
		Mechanoelectric efforts in ionic gels, P.G. De Gennes, K. Okumura, M. Shahinpoor, K.J. Kim, Europhysics Letters 50, 513 (2000)	
		Bending of Polyelectrolyte Membrane-Platinum Composites by Electric Stimuli I. Response Characteristics to Various Waveforms, K. Asaka K. Oguro, Y. Nishimura, M. Mizuhata, H. Takenaka, Polym. J. 27, 436 (1995)	
		Ionic Polymeric Gels, R. Hamden, C. Kent, S. Shafer, Nature 206, 1149 (1965)	

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Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Collapse of Gels in an Electric Field, T. Tanaka, I. Nishio, S. Sun, S. Ueno-Nishio, Science 218, 467 (1982)	
		A polymer gel with electrically driven motility, Y. Osada, H. Okuzaki, H. Hori, Nature 355, 242 (1992)	
		Deformation of Ionic Polymer Gels by Electric Fields, M. Doi, M. Matsumoto, Y. Hirose, Macromolecules 25, 5504 (1992)	

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